

23.2.2025  
Media Release

**DATO' IR. PATHMANATHAN K.**  
CEO, PBAHB and PBAPP.

## **NEW RM20 MILLION WATER TREATMENT PLANT RESIDUE PROCESSING FACILITY IN SUNGAI DUA**

- **The Sungai Dua Dewatering Plant (SDDP) is designed to handle up to 500 metric tons of water treatment plant (WTP) residue per day.**

PENANG, Sunday, 23.2.2025: Penang Chief Minister YAB Tuan Chow Kon Yeow has opened a new Sungai Dua Dewatering Plant (SDDP) to safely handle up to 500 metric tons (mt) of water treatment plant (WTP) residue today.

The SDDP was built specifically to handle residue generated in the Sungai Dua WTP, Penang's largest and most important WTP.

In 2024, the average daily treated water output of this plant was 1,021 million litres per day (MLD). Its treated water was supplied to about 465,000 water consumers in Seberang Perai and Penang Island.

The water treatment processes to produce 1,021 MLD generated about 450 metric tons (mt) of WTP residue per day.

Let us consider what 450mt represents: As an example, the published weight of the popular Perodua Ativa SUV is 1,035kg, which is equivalent to 1.035mt. As such, 450mt is roughly equivalent to the mass of 435 Ativas.

Please note that the maximum design capacity of the SDDP is 500mt. The additional 50mt margin accommodates the production of up to 1,342 MLD of treated water per day in the future.

The SDDP is an out-sourced RM20 million facility. It will be operated by Alam Aliran Kualiti Sdn Bhd (AAK), a Penang-based scheduled waste management and waste water treatment company, under PBAPP supervision.

The SDDP presents us with the following key benefits:

1. Safer and more environment-friendly handling of WTP residue, which is in line the State Government's "Penang2030" vision of making this state a "family-focused green and smart state that inspires the nation".

2. Compliance with Department of Environment (DOE) regulations on the disposal of WTP residue which it has classified as a “scheduled waste” in Malaysia.
3. 74% cost savings: Under a contract signed with AAK, the cost for the disposal of Sungai Dua WTP residue is locked in at RM145 per mt, as compared to an estimate of RM550 per mt for unprocessed WTP residue disposal. In other words, AAK has pledged to safely dewater, process and dispose of the Sungai Dua WTP residue at a much lower cost for Penang’s benefit.

### **Background: WTP Residue**

In 1973, the Sungai Dua WTP was officially opened by the second Prime Minister of Malaysia, the late YAB Tun Abdul Razak bin Hussein, as part of the Muda River Water Scheme (MRWS).

Back then, its maximum design treatment capacity was only 136 MLD. The plant was designed to release its WTP residue into Sungai Merbau Kudong nearby.

WTP residue is a by-product of conventional water treatment operations worldwide. In Canada, Japan, Netherlands, Singapore, the USA and the United Kingdom, WTP residue is recycled in safe and environmentally-friendly ways.

In Malaysia, WTP residue has been found to be “not toxic, corrosive, carcinogenic, ignitable or hazardous to the aquatic environment”, according to the results of scientific studies and tests conducted by the Malaysian Water Association (MWA), Pengurusan Aset Air Berhad (PAAB) and Malaysian Water Engineers Action Committee (MyWAC).

However, in 2009, the DOE classified WTP residue as a “scheduled waste” that may only be disposed “Class 4” landfills. The cost to dispose hundreds of metric tons of WTP residue generated per day is high; and would have to be passed on to water consumers in the form of higher water rates.

Hence, PBAPP ventured into a recycling project in 2009 to use Sungai Dua WTP residue as a component for the production of clay bricks which may be used in the construction industry. This recycling project was technically viable and won awards. However, the market uptake for the end-product was slow.

Today, in 2025, the maximum design treatment capacity of the Sungai Dua WTP has been upgraded to almost 10-fold of the original capacity, from 136 MLD to 1,342 MLD.

Accordingly, the volume of WTP residue generated by the plant’s daily processes has increased exponentially. As such, we chose to tackle the WTP residue issue from a different angle.

Today's official opening of the SDDP by YAB Tuan Chow marks another key milestone for PBAPP, in terms of operational philosophy:

As we continue to do more to supply more water in Penang, we will also strive to do things better.

The operations of this SDDP will make sure that our water treatment operations at Sungai Dua are safer and more environment-friendly. This is the way forward.

Thank You.

---

Issued by : Syarifah Nasywa bt Syed Feisal Barakbah  
Corporate Communications Section  
Email : [syarifah@pba.com.my](mailto:syarifah@pba.com.my)